Information Request DTE 1-15

Please refer to the Molina testimony at 6, 7, and Exh. AJM-4.

Request:

Please discuss whether the new transformers would produce a "pure tone."

Response:

Typical transformer noise is mostly due to core steel laminations undergoing elongation and contraction (magnetostriction) as magnetic flux through them varies. This magnetostriction is non-linear and independent of flux direction. Hence, noise is emitted in even multiples of the excitation frequency, i. e.: 120, 240, 360 Hz for a 60 Hz power system, with the 120 & 240 Hz components, typically, being the largest in magnitude.

However, the sound survey conducted by the Company indicates that noise from the transformers will be attenuated by the distance and physical barriers to the residences to a point where the energy of the single frequencies will **NOT** exceed the energy of the ambient noise.

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